DCSMS-016

Docket Nos. 50-317
and 50-318

DEC 30 1983

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Mr. A. E. Lundvall, Jr.
Vice President - Supply
Baltimore Gas & Electric Company
P. O. Box 1475
Baltimore, Maryland 21203

Dear Mr. Lundvall:

The Commission has issued the enclosed Amendment Nos. 89 and 70 to Facility Operating License Nos. DPR-53 and DPR-69 for Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2. These amendments consist of changes to the Technical Specifications in response to your application dated September 20 as supplemented October 12, 1983. In our review of your request, we found it necessary to make certain changes which were discussed with and agreed to by your staff.

The amendments revise the Technical Specifications to (1) clarify the operability requirements for the containment purge isolation valves, (2) correct typographical errors, (3) clarify the Basis for combustible gas control system, (4) change the list of safety related seismic restraints, "snubbers," which are required to be operable and undergo surveillance, (5) change the requirements for surveillance of Containment Spray Actuation Signal (CSAS) Subchannels A-3 and B-3 (Unit 2 only), and (6) change the surveillance requirements for the control room emergency ventilation system.

A copy of the related Safety Evaluation is enclosed. The notice of issuance will be included in the Commission's next monthly Federal Register notice.

Sincerely,

Original signed by

David H. Jaffe, Project Manager
Operating Reactors Branch #3
Division of Licensing

Enclosures:
1. Amendment No. 89 to DPR-53
2. Amendment No. 70 to DPR-69
3. Safety Evaluation

cc: See next page

ORB#3:DL	ORB#3:DL	ORB#3:DL	OELD	AD:OR:DL
PMKreutzer	DJaffe/pn	JRMiller		GCLainas
12/16/83	12/16/83	12/16/83	12/20/83	12/29/83

Baltimore Gas and Electric Company

cc:
James A. Biddison, Jr.
General Counsel
Baltimore Gas and Electric Company
P. O. Box 1475
Baltimore, MD 21203

George F. Trowbridge, Esquire
Shaw, Pittman, Potts and Trowbridge
1800 M Street, N. W.
Washington, D. C. 20036

Mr. R. C. L. Olson, Principal Engineer
Nuclear Licensing Analysis Unit
Baltimore Gas and Electric Company
Room 922 - G&E Building
P. O. Box 1475
Baltimore, MD 21203

Mr. Leon B. Russell
Plant Superintendent
Calvert Cliffs Nuclear Power Plant
Maryland Routes 2 & 4
Lusby, MD 20657

Bechtel Power Corporation
Attn: Mr. J. C. Ventura
Calvert Cliffs Project Engineer
15740 Shady Grove Road
Gaithersburg, MD 20760

Combustion Engineering, Inc.
Attn: Mr. R. R. Mills, Manager
Engineering Services
P. O. Box 500
Windsor, CT 06095

Ms. Mary Harrison, President
Calvert County Board of County Commissioners
Prince Frederick, MD 20768

U. S. Environmental Protection Agency
Region III Office
Attn: Regional Radiation Representative
Curtis Building (Sixth Floor)
Sixth and Walnut Streets
Philadelphia, PA 19106

Mr. Ralph E. Architzel
Resident Reactor Inspector
NRC Inspection and Enforcement
P. O. Bos 437
Lusby, MD 20657

Mr. Charles B. Brinkman
Manager - Washington Nuclear Operations
Combustion Engineering, Inc.
7910 Woodmont Avenue
Bethesda, MD 20814

Mr. J. A. Tiernan, Manager
Nuclear Power Department
Calvert Cliffs Nuclear Power Plant
Maryland Routes 2 & 4
Lusby, MD 20657

Mr. W. J. Lippold, Supervisor
Nuclear Fuel Management
Baltimore Gas and Electric Company
Calvert Cliffs Nuclear Power Plant
P. O. Box 1475
Baltimore, Maryland 21203

Mr. R. E. Denton, General Supervisor
Training & Technical Services
Calvert Cliffs Nuclear Power Plant
Maryland Routes 2 & 4
Lusby, MD 20657

Mr. R. M. Douglass, Manager
Quality Assurance Department
Baltimore Gas & Electric Company
Fort Smallwood Road Complex
P. O. Box 1475
Baltimore, MD 21203

Mr. S. M. Davis, General Supervisor
Operations Quality Assurance
Calvert Cliffs Nuclear Power Plant
Maryland Routes 2 & 4
Lusby, MD 20657

Administrator, Power Plant Siting Program
Energy and Coastal Zone Administration
Department of Natural Resources
Tawes State Office Building
Annapolis, MD 21204

Regional Administrator
Nuclear Regulatory Commission, Region I
Office of Executive Director for Operations
631 Park Avenue
King of Prussia, Pennsylvania 19406

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

BALTIMORE GAS AND ELECTRIC COMPANY

DOCKET NO. 50-317

CALVERT CLIFFS NUCLEAR POWER PLANT UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 89
License No. DPR-53

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Baltimore Gas & Electric Company (the licensee) dated September 20 as supplemented October 12, 1983, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (1) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-53 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 89 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

James R. Miller, Chief
Operating Reactors Branch #3
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: December 30, 1983

ATTACHMENT TO LICENSE AMENDMENT NO. 89

FACILTIY OPERATING LICENSE NO. DPR-53

DOCKET NO. 50-317

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the areas of change. The corresponding overleaf pages are provided to maintain document completeness.

Pages

3/4 3-26
3/4 6-9d
3/4 7-18
3/4 7-28
3/4 7-46
3/4 7-58
3/4 7-59
3/4 10-4
B 3/4 6-3

INSTRUMENTATION

3/4.3.3 MONITORING INSTRUMENTATION

RADIATION MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.1 The radiation monitoring instrumentation channels shown in Table 3.3-6 shall be OPERABLE with their alarm/trip setpoints within the specified limits.

APPLICABILITY: As shown in Table 3.3-6.

ACTION:

a. With a radiation monitoring channel alarm/trip setpoint exceeding the value shown in Table 3.3-6, adjust the setpoint to within the limit within 4 hours or declare the channel inoperable.

b. With one or more radiation monitoring channels inoperable, take the ACTION shown in Table 3.3-6.

c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.1 Each radiation monitoring instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations during the modes and at the frequencies shown in Table 4.3-3.

TABLE 3.3-6

RADIATION MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	MEASUREMENT RANGE	ACTION
1. AREA MONITORS					
a. Containment					
i. Purge & Exhaust Isolation	3	6	$\leq$ 220 mr/hr	10^{-1} - 10^{4} mr/hr	16
2. PROCESS MONITORS					
a. Containment					
i. Gaseous Activity					
a) RCS Leakage Detection	1	1, 2, 3 & 4	Not Applicable	10^{1} - 10^{6} cpm	14
ii. Particulate Activity					
a) RCS Leakage Detection	1	1, 2, 3 & 4	Not Applicable	10^{1} - 10^{6} cpm	14

CONTAINMENT SYSTEMS

CONTAINMENT PURGE SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.1.7 The containment purge supply and exhaust isolation valves shall be closed by isolating air to the air operator and maintaining the solenoid air supply valve deenergized.

APPLICABILITY: MODES 1, 2, 3 and 4

ACTION:

a. With one containment purge supply and/or one exhaust isolation valve open, close the open valve(s) within one hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With one containment purge supply and/or one exhaust isolation valve inoperable due to high leakage, repair the valve(s) within 24 hours or be in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.7 The 48-inch containment purge supply and exhaust isolation valves shall be determined closed at least once per 31 days, by verifying that power to the solenoid valve is removed.

PLANT SYSTEMS

3/4.7.6 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.6.1 The control room emergency ventilation system shall be OPERABLE with:

a. Two filter trains,

b. Two air conditioning units,*

c. Two isolation valves in each control room outside air intake duct,

d. Two isolation valves in the common exhaust to atmosphere duct, and

e. One isolation valve in the toilet area exhaust duct.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

a. With one filter train inoperable, restore the inoperable train to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With one air conditioning unit inoperable, restore the inoperable unit to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

c. With one isolation valve per control room outside air intake duct inoperable, operation may continue provided the other isolation valve in the same duct is maintained closed; otherwise, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

d. With one common exhaust to atmosphere duct isolation valve inoperable, restore the inoperable valve to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

e. With the toilet area exhaust duct isolation valve inoperable, restore the inoperable valve to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

---

* For the duration of the October 1982 Unit 2 refueling outage with Unit 2 in MODES 5 or 6 and one air conditioning unit inoperable, restore the inoperable unit to operable status within 21 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.6.1 The control room emergency ventilation system shall be demonstrated OPERABLE:

a. At least once per 62 days, on a staggered test basis, by deenergizing the backup control room air conditioner and verifying that the emergency control room air conditioners maintain the air temperature $\leq$ 104°F for at least 12 hours when in the recirculation mode.

b. At least once per 31 days by initiating flow through each HEPA filter and charcoal adsorber train and verifying that each train operates for at least 15 minutes.

c. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housing, or (2) following painting, fire or chemical release in any ventilation zone communicating with the system by:

1. Verifying that the charcoal adsorbers remove $\geq$ 99% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with ANSI N510-1975 while operating the ventilation system at a flow rate of 2000 cfm $\pm$ 10%.

2. Verifying that the HEPA filter banks remove $\geq$ 99% of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the ventilation system at a flow rate of 2000 cfm $\pm$ 10%.

3. Verifying within 31 days after removal that a laboratory analysis of a carbon sample from either at least one test canister or at least two carbon samples removed from one of the charcoal adsorbers demonstrates a removal efficiency of $\geq$ 90% for radioactive methyl iodide when the sample is tested in accordance with ANSI N510-1975 (130°C, 95% R.H.). The carbon samples not obtained from test canisters shall be prepared by emptying a representative sample from an adsorber test tray section, mixing the adsorbent thoroughly, and obtaining samples at least two inches in diameter and with a length equal to the thickness of the bed. Successive samples will be removed from different test tray sections.

TABLE 3.7-4

SAFETY RELATED HYDRAULIC SNUBBERS*

SNUBBER NO.	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE** (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
1-11-1	SERVICE WATER PUMP #13 SUCTION 5'	A	No	No
1-11-2	SERVICE WATER PUMP #13 SUCTION 5'	A	No	No
1-11-3	SERVICE WATER PUMP #13 SUCTION 5'	A	No	No
1-11-4	SERVICE WATER PUMP #12 SUCTION 5'	A	No	No
1-11-5	SERVICE WATER PUMP #12 SUCTION 5'	A	No	No
1-11-6	SERVICE WATER PUMP #11 SUCTION 5'	A	No	No
1-11-7	SERVICE WATER PUMP #11 SUCTION 5'	A	No	No
1-11-8	SERVICE WATER PUMP #11 SUCTION 5'	A	No	No
1-11-9	SERVICE WATER PUMP #11 SUCTION 5'	A	No	No
1-11-10	SERVICE WATER HEADER FROM TURBINE BLDG. 5'	A	No	No

TABLE 3.7-4

SAFETY RELATED HYDRAULIC SNUBBERS*

SNUBBER NO.	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE** (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
1-11-11	SERVICE WATER FROM CONTAINMENT COOLERS 5'	A	No	Yes
1-11-11A	SERVICE WATER PUMP SUCTION HDR 5'	A	No	No
1-11-12	SERVICE WATER FROM CONTAINMENT COOLERS 5'	A	No	Yes
1-11-13	SERVICE WATER FROM SPENT FUEL POOL COOLERS 5'	A	No	Yes
1-11-14	SERVICE WATER FROM CONTAINMENT COOLERS 5'	A	No	No
1-11-16	SERVICE WATER PUMP DISCHARGE HEADER 5'	A	No	No
1-11-17	SERVICE WATER PUMP DISCHARGE HEADER 5'	A	No	No
1-11-18	SERVICE WATER PUMP DISCHARGE HEADER 5'	A	No	No
1-11-18A	SERVICE WATER PUMP DISCHARGE HEADER 5'	A	No	No
1-11-19	SERVICE WATER PUMP DISCHARGE HEADER 5'	A	No	No

TABLE 3.7-4

SAFETY RELATED HYDRAULIC SNUBBERS*

SNUBBER NO.	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE** (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
1-54-12	ERV-404 DISCHARGE 89'	I	Yes	No
1-54-14	RECIRC. RELIEF VALVE DISCH. TO QUENCH TANK 28'	I	Yes	No
1-54-15	RECIRC. RELIEF VALVE DISCH. TO QUENCH TANK 28'	I	Yes	No
1-54-16	RECIRC. RELIEF VALVE DISCH. TO QUENCH TANK 40'	I	Yes	No
1-54-17	RECIRC. RELIEF VALVE DISCH. TO QUENCH TANK 49'	I	Yes	No
1-54-18	ERV-404 RV 201 DISCH. HEADER 89'	I	Yes	No
1-54-19	RV 201 DISCHARGE 89'	I	Yes	No
1-54-20	RV 200, RV 201 SEAT DRAIN HEADER 83'	I	Yes	No
1-54-21	RV 200, RV201 SEAT DRAIN HEADER 77'	I	Yes	No
1-54-23	PRESSURIZER RELIEF 90'	I	Yes	No

TABLE 3.7-4

SAFETY RELATED HYDRAULIC SNUBBERS*

SNUBBER NO.	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE** (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
1-60-1	SERVICE WATER TO CONTAINMENT COOLER #12 42'	I	Yes	No
1-60-2	SERVICE WATER TO CONTAINMENT COOLER #12 43'	I	Yes	No
1-60-3	SERVICE WATER TO CONTAINMENT COOLER #12, 65'	I	Yes	No
1-60-4	SERVICE WATER TO CONTAINMENT COOLER #14 66'	I	Yes	No
1-60-4A	SERVICE WATER FROM CONTAINMENT COOLER #14 66'	I	Yes	No
1-60-5	SERVICE WATER FROM CONTAINMENT COOLER #14, 68'	I	Yes	No
1-60-5A	SERVICE WATER FROM CONTAINMENT COOLER #14 68'	I	Yes	No
1-60-6	SERVICE WATER FROM CONTAINMENT COOLER #12, 53'	I	Yes	No

TABLE 3.7-4

SAFETY RELATED HYDRAULIC SNUBBERS*

SNUBBER NO.	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE** (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
1-64-98'	RCP 11A and 11B MOTORS 56'	I	Yes	No
1-64-99	RCP 11A and 11B MOTORS 56'	I	Yes	No
1-64-100	RCP 12A and 12B MOTORS 56'	I	Yes	No
1-64-101	RCP 12A and 12B MOTORS 56'	I	Yes	No
1-64-102	RCP 12A and 12B MOTORS 56'	I	Yes	No
1-64-103	RCP 12A and 12B MOTORS 56'	I	Yes	No
1-67-1	#11 SPENT FUEL POOL COOL. PUMP SUCTION - RWT 27'	A	No	No
1-67-2	INLET - SPENT FUEL POOL COOLER #12 27'	A	No	No
1-67-2A	INLET - SPENT FUEL POOL COOLER #12 27'	A	No	No
1-67-3	WATER TO REFUELING POOL #11 38'	I	Yes	No
1-67-4	WATER TO REFUELING POOL #11 40'	I	Yes	No

Amendment No. 2
APR 24 1979

TABLE 3.7-4

SAFETY RELATED HYDRAULIC SNUBBERS*

SNUBBER NO.	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE** (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
1-83-1	MAIN STEAM FROM S.G. #11 27'	A	No	Yes
1-83-2	MAIN STEAM FROM S.G. #11 27'	A	No	Yes
1-83-3	MAIN STEAM FROM S.G. #12 27'	A	No	Yes
1-83-4	MAIN STEAM FROM S.G. #12 27'	A	No	No
1-83-5	MAIN STEAM FROM S.G. #11 27'	A	No	Yes
1-83-6	MAIN STEAM FROM S.G. #12 27'	A	No	No
1-83-11	MAIN STEAM LINE 27' PENETRATION TUNNEL	I	No	Yes
1-83-12	MAIN STEAM LINE 27' PENETRATION TUNNEL	I	No	Yes
1-83-13	MAIN STEAM LINE 27' PENETRATION TUNNEL	I	No	Yes
1-83-14	MAIN STEAM LINE 27' PENETRATION TUNNEL	I	No	Yes
1-83-15	MAIN STEAM LINE 27' PENETRATION TUNNEL	I	No	Yes
1-83-16	MAIN STEAM LINE 27' PENETRATION TUNNEL	I	No	Yes
1-83-18	MAIN STEAM LINE 27' PENETRATION TUNNEL	I	No	Yes

TABLE 3.7-4

SAFETY RELATED HYDRAULIC SNUBBERS*

SNUBBER NO.	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE** (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)	
1-83-19	MAIN STEAM LINE 27' PENETRATION TUNNEL	I	No	Yes	I
1-83-20	MAIN STEAM LINE 27' PENETRATION TUNNEL	I	No	Yes	I
1-83-21	MAIN STEAM LINE 27' PENETRATION TUNNEL	I	No	Yes	I
1-83-22	MAIN STEAM LINE 27' PENETRATION TUNNEL	I	No	Yes	I
1-83-23	MAIN STEAM LINE 27' PENETRATION TUNNEL	I	No	Yes	I
1-83-29	#11 AFPT STEAM SUPPLY HEADER 12'	A	No	No	
1-83-30	MSIV #12 HYDRAULIC SUPPLY 5'	A	No	No	
1-83-31	MSIV #12 HYDRAULIC SUPPLY 5'	A	No	No	
1-83-32	MSIV #12 HYDRAULIC SUPPLY 5'	A	No	No	
1-83-33	MSIV #12 HYDRAULIC SUPPLY 5'	A	No	No	
1-83-34	MSIV #12 HYDRAULIC SUPPLY 27'	A	No	No	
1-83-35	MSIV #12 HYDRAULIC SUPPLY 27'	A	No	No	
1-83-36	MSIV #12 HYDRAULIC SUPPLY 27'	A	No	No	
1-83-37	MSIV #12 HYDRAULIC SUPPLY 27'	A	No	No	

TABLE 3.7-4

SAFETY RELATED HYDRAULIC SNUBBERS*

SNUBBER NO.	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE** (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
1-83-38	MS FROM S.G. #12 TO AUX. FEED PUMP 27'	A	No	No
1-83-40	MS FROM S.G. #12 TO AUX. FEED PUMP 27'	A	No	No
1-83-40A	MS FROM S.G. #12 TO AUX. FEED PUMP 27'	A	No	No
1-83-41	AUX. FEED PUMP ISO. VALVE BYPASS 27'	A	No	No
1-83-44	STEAM SUPPLY TO AUX. FEED PUMP 27'	A	No	No
1-83-47	AUX. FEED PUMP ISO. VALVE BYPASS 27'	A	No	No
1-83-48	AUX. FEED PUMP ISO. VALVE BYPASS 27'	A	No	No
1-83-49	MAIN STEAM LINE ENCAPSULATION 27'	A	No	Yes
1-83-50	MAIN STEAM LINE ENCAPSULATION 27'	A	No	Yes
1-83-51	MAIN STEAM LINE ENCAPSULATION 27'	A	No	Yes
1-83-52	MAIN STEAM LINE ENCAPSULATION 27'	A	No	Yes
1-83-53	MAIN STEAM LINE ENCAPSULATION 27'	A	No	Yes
1-83-54	MAIN STEAM LINE ENCAPSULATION 27'	A	No	No

SPECIAL TEST EXCEPTIONS

NO FLOW TESTS

LIMITING CONDITION FOR OPERATION

3.10.3 The limitations of Specification 3.4.1 may be suspended during the performance of startup and PHYSICS TESTS, provided:

a. The THERMAL POWER does not exceed 5% of RATED THERMAL POWER, and

b. The reactor trip setpoints of the OPERABLE power level channels are set at $\leq$ 15% of RATED THERMAL POWER.

APPLICABILITY: During startup and PHYSICS TESTS.

ACTION:

With the THERMAL POWER > 5% of RATED THERMAL POWER, immediately trip the reactor.

SURVEILLANCE REQUIREMENTS

4.10.3.1 The THERMAL POWER shall be determined to be $\leq$ 5% of RATED THERMAL POWER at least once per hour during startup and PHYSICS TESTS.

4.10.3.2 Each wide range logarithmic and power level neutron flux monitoring channel shall be subjected to a CHANNEL FUNCTIONAL TEST within 12 hours prior to initiating startup or PHYSICS TESTS.

SPECIAL TEST EXCEPTIONS

CENTER CEA MISALIGNMENT

LIMITING CONDITION FOR OPERATION

3.10.4 The requirements of Specifications 3.1.3.1 and 3.1.3.6 may be suspended during the performance of PHYSICS TESTS to determine the isothermal temperature coefficient and power coefficient provided:

a. Only the center CEA (CEA #1) is misaligned, and

b. The limits of Specification 3.2.1 are maintained and determined as specified in Specification 4.10.4.2 below.

APPLICABILITY: MODES 1 and 2.

ACTION:

With any of the limits of Specification 3.2.1 being exceeded while the requirements of Specifications 3.1.3.1 and 3.1.3.6 are suspended, either:

a. Reduce THERMAL POWER sufficiently to satisfy the requirements of Specification 3.2.1, or

b. Be in HOT STANDBY within 6 hours.

SURVEILLANCE REQUIREMENTS

4.10.4.1 The THERMAL POWER shall be determined at least once per hour during PHYSICS TESTS in which the requirements of Specifications 3.1.3.1 and/or 3.1.3.6 are suspended and shall be verified to be within the test power plateau.

4.10.4.2 The linear heat rate shall be determined to be within the limits of Specification 3.2.1 by monitoring it continuously with the Incore Detector Monitoring System pursuant to the requirements of Specifications 4.2.1.3 and 3.3.3.2 during PHYSICS TESTS above 5% of RATED THERMAL POWER in which the requirements of Specifications 3.1.3.1 and/or 3.1.3.6 are suspended.

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

3/4.6.2.1 CONTAINMENT SPRAY SYSTEM

The OPERABILITY of the containment spray system ensures that containment depressurization and cooling capability will be available in the event of a LOCA. The pressure reduction and resultant lower containment leakage rate are consistent with the assumptions used in the accident analyses.

3/4.6.2.2 CONTAINMENT COOLING SYSTEM

The OPERABILITY of the containment cooling system ensures that 1) the containment air temperature will be maintained within limits during normal operation, and 2) adequate heat removal capacity is available when operated in conjunction with the containment spray systems during post-LOCA conditions.

3/4.6.3 IODINE REMOVAL SYSTEM

The OPERABILITY of the containment iodine filter trains ensures that sufficient iodine removal capability will be available in the event of a LOCA. The reduction in containment iodine inventory reduces the resulting site boundary radiation doses associated with containment leakage. The operation of this system and resultant iodine removal capacity are consistent with the assumptions used in the LOCA analyses.

3/4.6.4 CONTAINMENT ISOLATION VALVES

The OPERABILITY of the containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment. Containment isolation within the time limits specified ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a LOCA.

3/4.6.5 COMBUSTIBLE GAS CONTROL

The OPERABILITY of the equipment and systems required for the detection and control of hydrogen gas ensures that this equipment will be available to maintain the hydrogen concentration within containment below its flammable limit during post-LOCA conditions. The detection equipment has been upgraded to meet the requirements of NUREG-0737, which included a detection range of 0 to 10 percent hydrogen. Either recombiner unit is capable of controlling the expected hydrogen generation associated with 1) zirconium-water reactions, 2) radiolytic decomposition of water and 3) corrosion of metals within containment.

3/4.6.6 PENETRATION ROOM EXHAUST AIR FILTRATION SYSTEM

The OPERABILITY of the penetration room exhaust system ensures that radioactive materials leaking from the containment atmosphere through containment penetrations following a LOCA are filtered and adsorbed prior to reaching the environment. The operation of this system and the resultant effect on offsite dosage calculations was assumed in the LOCA analyses.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

BALTIMORE GAS AND ELECTRIC COMPANY

DOCKET NO. 50-318

CALVERT CLIFFS NUCLEAR POWER PLANT UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 70
License No. DPR-69

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Baltimore Gas & Electric Company (the licensee) dated September 20 as supplemented October 12, 1983, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (1) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.2 of Facility Operating License No. DPR-69 is hereby amended to read as follows:

   2. Technical Specifications

      The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 70 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

James R. Miller, Chief
Operating Reactors Branch #3
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: December 30, 1983

ATTACHMENT TO LICENSE AMENDMENT NO. 70

FACILTIY OPERATING LICENSE NO. DPR-69

DOCKET NO. 50-318

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the areas of change. The corresponding overleaf pages are provided to maintain document completeness.

Pages

3/4 3-22
3/4 3-24
3/4 3-26
3/4 6-9a
3/4 7-18
3/4 7-31
3/4 10-4
B 3/4 6-4

TABLE 3.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

INITIATING SIGNAL AND FUNCTION	RESPONSE TIME IN SECONDS
6. Steam Generator Pressure-Low	
a. Main Steam Isolation	≤ 6.9
b. Feedwater Isolation	≤ 80
7. Refueling Water Tank-Low	
a. Containment Sump Recirculation	≤ 80
8. Reactor Trip	
a. Feedwater Flow Reduction to 5%	≤ 20
9. Loss of Power	
a. 4.16 kv Emergency Bus Undervoltage (Loss of Voltage)	≤ 2.2***
b. 4.16 kv Emergency Bus Undervoltage (Degraded Voltage)	≤ 8.4***
10. Steam Generator Level - Low	
a. Motor Driven AFW Pump	≤ 54.5* / 14.5**
b. Steam Driven AFW Pump	≤ 54.5
11. Steam Generator ΔP-High	
a. Auxiliary Feedwater Isolation	≤ 20.0

TABLE NOTATION

*Diesel generator starting and sequence loading delays included.

**Diesel generator starting and sequence loading delays not included. Offsite power available.

***Response time measured from the incidence of the undervoltage condition to the diesel generator start signal.

TABLE 4.3-2

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTAION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1. SAFETY INJECTION (SIAS)				
a. Manual (Trip Buttons)	N.A.	N.A.	R	N.A.
b. Containment Pressure - High	S	R	M	1, 2, 3
c. Pressurizer Pressure - Low	S	R	M	1, 2, 3
d. Automatic Actuation Logic	N.A.	N.A.	M(1)(3)	1, 2, 3
2. CONTAINMENT SPRAY (CSAS)				
a. Manual (Trip Buttons)	N.A.	N.A.	R	N.A.
b. Containment Pressure -- High	S	R	M	1, 2, 3
c. Automatic Actuation Logic	N.A.	N.A.	M(1)(6)	1, 2, 3
3. CONTAINMENT ISOLATION (CIS) #				
a. Manual CIS (Trip Buttons)	N.A.	N.A.	R	N.A.
b. Containment Pressure - High	S	R	M	1, 2, 3
c. Automatic Actuation Logic	N.A.	N.A.	M(1)(4)	1, 2, 3
4. MAIN STEAM LINE ISOLATION (SGIS)				
a. Manual SGIS (MSIV Hand Switches and Feed Head Isolation Hand Switches)	N.A.	N.A.	R	N.A.
b. Steam Generator Pressure - Low	S	R	M	1, 2, 3
c. Automatic Actuation Logic	N.A.	N.A.	M(1)(5)	1, 2, 3

Containment isolation of non-essential penetrations is also initiated by SIAS (functional units 1.a and 1.c).

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
5. CONTAINMENT SUMP RECIRCULATION (RAS)				
a. Manual RAS (Trip Buttons)	N.A.	N.A.	R	N.A.
b. Refueling Water Tank - Low	N.A.	R	M	1, 2, 3
c. Automatic Actuation Logic	N.A.	N.A.	M(1)	1, 2, 3
6. CONTAINMENT PURGE VALVES ISOLATION ##				
a. Manual (Purge Valve Control Switches)	N.A.	N.A.	R	N.A.
b. Containment Radiation - High Area Monitor	S	R	M	6
7. LOSS OF POWER				
a. 4.16 kv Emergency Bus Undervoltage (Loss of Voltage)	N.A.	R	M	1, 2, 3
b. 4.16 kv Emergency Bus Undervoltage (Degraded Voltage)	N.A.	R	M	1, 2, 3
8. CVCS ISOLATION West Penetration Room/ Letdown Heat Exchanger Room Pressure - High	N.A.	R	M	1, 2, 3, 4
9. AUXILIARY FEEDWATER				
a. Manual (Trip Buttons)	N.A.	N.A.	R	N.A.
b. Steam Generator Level - Low	S	R	M	1, 2, 3
c. Steam Generator ΔP-High	S	R	M	1, 2, 3
d. Automatic Actuation Logic	N.A.	N.A.	M(1)	1, 2, 3

Containment purge valve isolation is also initiated by SIAS (functional units 1.a, 1.b and 1.c).

TABLE 4.3-2 (Continued)

TABLE NOTATION

(1) The logic circuits shall be tested manually at least once per 31 days.

(3) SIAS logic circuits A-5, B-5, A-10 and B-10 may be exempted from testing during operation; however, these logic circuits shall be tested at least once per 18 months during shutdown.

(4) CIS logic circuits A-5 and B-5 may be exempted from testing during operation; however, these logic circuits shall be tested at least once per 18 months during shutdown.

(5) SGIS logic circuits A-1 and B-1 may be exempted from testing during operation; however, these logic circuits shall be tested at least once per 18 months during shutdown.

(6) CSAS logic circuits A-3 and B-3 may be exempted from testing during operation; however, these logic circuits shall be tested at least once per 18 months during shutdown.

INSTRUMENTATION

3/4.3.3 MONITORING INSTRUMENTATION

RADIATION MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.1 The radiation monitoring instrumentation channels shown in Table 3.3-6 shall be OPERABLE with their alarm/trip setpoints within the specified limits.

APPLICABILITY: As shown in Table 3.3-6.

ACTION:

a. With a radiation monitoring channel alarm/trip setpoint exceeding the value shown in Table 3.3-6, adjust the setpoint to within the limit within 4 hours or declare the channel inoperable.

b. With one or more radiation monitoring channels inoperable, take the ACTION shown in Table 3.3-6.

c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.1 Each radiation monitoring instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations during the modes and at the frequencies shown in Table 4.3-3.

TABLE 3.3-6

RADIATION MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	MEASUREMENT RANGE	ACTION
1. AREA MONITORS					
a. Containment					
i. Purge & Exhaust Isolation	3	6	$\leq$ 220 mr/hr	10^{-1} - 10^{4} mr/hr	16
2. PROCESS MONITORS					
a. Containment					
i. Gaseous Activity					
a) RCS Leakage Detection	1	1, 2, 3 & 4	Not Applicable	10^{1} - 10^{6} cpm	14
ii. Particulate Activity					
a) RCS Leakage Detection	1	1, 2, 3 & 4	Not Applicable	10^{1} - 10^{6} cpm	14

SURVEILLANCE REQUIREMENTS (Continued)

4.6.1.6.3 Liner Plate The structural integrity of the containment liner plate shall be determined during the shutdown for each Type A containment leakage rate test (reference Specification 4.6.1.2) by a visual inspection of the plate and verifying no apparent changes in appearance or other abnormal degradation.

4.6.1.6.4 Reports Any abnormal degradation of the containment structure detected during the above required tests and inspections shall be reported to the Commission pursuant to Specification 6.9.1. This report shall include a description of the tendon condition, the condition of the concrete (especially at tendon anchorages), the inspection procedure, the tolerances on cracking, and the corrective actions taken.

CONTAINMENT SYSTEMS

CONTAINMENT PURGE SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.1.7 The containment purge supply and exhaust isolation valves shall be closed by isolating air to the air operator and maintaining the solenoid air supply valve deenergized.

APPLICABILITY: MODES 1, 2, 3 and 4

ACTION:

a. With one containment purge supply and/or one exhaust isolation valve open, close the open valve(s) within one hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With one containment purge supply and/or one exhaust isolation valve inoperable due to high leakage, repair the valve(s) within 24 hours or be in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.1.7 The 48-inch containment purge supply and exhaust isolation valves shall be determined closed at least once per 31 days, by verifying that power to the solenoid valve is removed.

PLANT SYSTEMS

3/4.7.6 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.6.1 The control room emergency ventilation system shall be OPERABLE with:

a. Two filter trains,

b. Two air conditioning units,

c. Two isolation valves in each control room outside air intake duct,

d. Two isolation valves in the common exhaust to atmosphere duct, and

e. One isolation valve in the toilet area exhaust duct.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

a. With one filter train inoperable, restore the inoperable train to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With one air conditioning unit inoperable, restore the inoperable unit to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

c. With one isolation valve per control room outside air intake duct inoperable, operation may continue provided the other isolation valve in the same duct is maintained closed; otherwise, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

d. With one common exhaust to atmosphere duct isolation valve inoperable, restore the inoperable valve to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

e. With the toilet area exhaust duct isolation valve inoperable, restore the inoperable valve to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.6.1 The control room emergency ventilation system shall be demonstrated OPERABLE:

a. At least once per 62 days, on a staggered test basis, by deenergizing the backup control room air conditioner and verifying that the emergency control room air conditioners maintain the air temperature $\leq$ 104°F for at least 12 hours when in the recirculation mode.

b. At least once per 31 days by initiating flow through each HEPA filter and charcoal adsorber train and verifying that each train operates for at least 15 minutes.

c. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housing, or (2) following painting, fire or chemical release in any ventilation zone communicating with the system by:

1. Verifying that the charcoal adsorbers remove $\geq$ 99% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with ANSI N510-1975 while operating the ventilation system at a flow rate of 2000 cfm $\pm$ 10%.

2. Verifying that the HEPA filter banks remove $\geq$ 99% of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the ventilation system at a flow rate of 2000 cfm $\pm$ 10%.

3. Verifying within 31 days after removal that a laboratory analysis of a carbon sample from either at least one test canister or at least two carbon samples removed from one of the charcoal adsorbers demonstrates a removal efficiency of $\geq$ 90% for radioactive methyl iodide when the sample is tested in accordance with ANSI N510-1975 (130°C, 95% R.H.). The carbon samples not obtained from test canisters shall be prepared by emptying a representative sample from an adsorber test tray section, mixing the adsorbent thoroughly, and obtaining samples at least two inches in diameter and with a length equal to the thickness of the bed. Successive samples will be removed from different test tray sections.

TABLE 3.7-4

SAFETY RELATED HYDRAULIC SNUBBERS*

SNUBBER NO.	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE** (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
2-15-5	COMP. COOLING PUMP #22 DISCH. 18'-6"	A	No	Yes
2-15-6	COMP. COOLING PUMPS DISCH. HEADER 14'-5"	A	No	Yes
2-15-7	COMP. COOLING PUMPS DISCH. HEADER 14'-5"	A	No	Yes
2-15-8	COMP. COOLING TO LIQUID WASTE EVAP. 64'	A	No	No
2-15-9	COMP. COOLING TO LIQUID WASTE EVAP. 64'	A	No	No
2-15-10	COMP. COOLING TO LIQUID WASTE EVAP. 64'	A	No	No
2-36-1	STEAM SUPPLY TO #22 AUX. SGFP 12'	A	No	No
2-36-1A	STEAM SUPPLY TO #22 AUX. SGFP 12'	A	No	No
2-36-2	STEAM SUPPLY TO #21 AUX. SGFP 12'	A	No	No
2-36-2A	STEAM SUPPLY TO #21 AUX. SGFP 12'	A	No	No
2-36-3	UNIT 2 AFW PUMP ROOM 18'	A	No	No
2-36-4	AFW INLET TO #21 STEAM GENERATOR 65'	I	Yes	No
2-36-4A	AFW INLET TO #21 STEAM GENERATOR 65'	I	Yes	No
2-36-5	AFW INLET TO #22 STEAM GENERATOR 65'	I	Yes	No

TABLE 3.7-4

SAFETY RELATED HYDRAULIC SNUBBERS*

SNUBBER NO.	SYSTEM SNUBBER INSTALLED ON, LOCATION AND ELEVATION	ACCESSIBLE OR INACCESSIBLE (A or I)	HIGH RADIATION ZONE** (Yes or No)	ESPECIALLY DIFFICULT TO REMOVE (Yes or No)
2-41-1	CHARGING LINE OUTLET OF REGEN HEAT EXCHG 40'	I	Yes	No
2-45-1	F.W. INLET TO #21 STEAM GENERATOR 40'-4"	I	Yes	No
2-45-1A	F.W. INLET TO #21 STEAM GENERATOR 40'-4"	I	Yes	No
2-45-2	F.W. INLET to #22 STEAM GENERATOR 55'	I	Yes	No
2-45-3	F.W. INLET TO #22 STEAM GENERATOR 55'	I	Yes	No
2-45-4	UNIT 2 MSIV PENETRATION RM 29'	A	No	No
2-45-4A	UNIT 2 MSIV PENETRATION RM 29'	A	No	No
2-45-5	UNIT 2 MSIV PENETRATION RM 29'	A	No	No
2-45-6	UNIT 2 MSIV PENETRATION RM 29'	A	No	No
2-45-7	OVERHEAD 5' UNDER MSIV ROOM 26'	I	No	Yes
2-52-1	#21 S.I. PUMPS SUCTION FROM CONT. SUMP 5'-7"	A	No	No
2-52-2	LPSI PUMP #21 SUCTION o'-6"	A	No	No
2-52-2A	LPSI PUMP #21 SUCTION 0'-6"	A	No	No
2-52-3	LPSI PUMP #22 DISCHARGE 4'-0"	A	No	No
2-52-3A	LPSI PUMP #22 DISCHARGE 4'-0"	A	No	No

SPECIAL TEST EXCEPTIONS

NO FLOW TESTS

LIMITING CONDITION FOR OPERATION

3.10.3 The limitations of Specification 3.4.1 may be suspended during the performance of startup and PHYSICS TESTS, provided:

a. The THERMAL POWER does not exceed 5% of RATED THERMAL POWER, and

b. The reactor trip setpoints of the OPERABLE power level channels are set at $\leq$ 15% of RATED THERMAL POWER.

APPLICABILITY: During startup and PHYSICS TESTS.

ACTION:

With the THERMAL POWER > 5% of RATED THERMAL POWER, immediately trip the reactor.

SURVEILLANCE REQUIREMENTS

4.10.3.1 The THERMAL POWER shall be determined to be $\leq$ 5% of RATED THERMAL POWER at least once per hour during startup and PHYSICS TESTS.

4.10.3.2 Each wide range logarithmic and power level neutron flux monitoring channel shall be subjected to a CHANNEL FUNCTIONAL TEST within 12 hours prior to initiating startup or PHYSICS TESTS.

SPECIAL TEST EXCEPTIONS

CENTER CEA MISALIGNMENT

LIMITING CONDITION FOR OPERATION

3.10.4 The requirements of Specifications 3.1.3.1 and 3.1.3.6 may be suspended during the performance of PHYSICS TESTS to determine the isothermal temperature coefficient and power coefficient provided:

a. Only the center CEA (CEA #1) is misaligned, and

b. The limits of Specification 3.2.1 are maintained and determined as specified in Specification 4.10.4.2 below.

APPLICABILITY: MODES 1 and 2.

ACTION:

With any of the limits of Specification 3.2.1 being exceeded while the requirements of Specifications 3.1.3.1 and 3.1.3.6 are suspended, either:

a. Reduce THERMAL POWER sufficiently to satisfy the requirements of Specification 3.2.1, or

b. Be in HOT STANDBY within 6 hours.

SURVEILLANCE REQUIREMENTS

4.10.4.1 The THERMAL POWER shall be determined at least once per hour during PHYSICS TESTS in which the requirements of Specifications 3.1.3.1 and/or 3.1.3.6 are suspended and shall be verified to be within the test power plateau.

4.10.4.2 The linear heat rate shall be determined to be within the limits of Specification 3.2.1 by monitoring it continuously with the Incore Detector Monitoring System pursuant to the requirements of Specifications 4.2.1.3 and 3.3.3.2 during PHYSICS TESTS above 5% of RATED THERMAL POWER in which the requirements of Specifications 3.1.3.1 and/or 3.1.3.6 are suspended.

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

3/4.6.2.1 CONTAINMENT SPRAY SYSTEM

The OPERABILITY of the containment spray system ensures that containment depressurization and cooling capability will be available in the event of a LOCA. The pressure reduction and resultant lower containment leakage rate are consistent with the assumptions used in the accident analyses.

3/4.6.2.2 CONTAINMENT COOLING SYSTEM

The OPERABILITY of the containment cooling system ensures that 1) the containment air temperature will be maintained within limits during normal operation, and 2) adequate heat removal capacity is available when operated in conjunction with the containment spray systems during post-LOCA conditions.

3/4.6.3 IODINE REMOVAL SYSTEM

The OPERABILITY of the containment iodine filter trains ensures that sufficient iodine removal capability will be available in the event of a LOCA. The reduction in containment iodine inventory reduces the resulting site boundary radiation doses associated with containment leakage. The operation of this system and resultant iodine removal capacity are consistent with the assumptions used in the LOCA analyses.

3/4.6.4 CONTAINMENT ISOLATION VALVES

The OPERABILITY of the containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment. Containment isolation within the time limits specified ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a LOCA.

3/4.6.5 COMBUSTIBLE GAS CONTROL

The OPERABILITY of the equipment and systems required for the detection and control of hydrogen gas ensures that this equipment will be available to maintain the hydrogen concentration within containment below its flammable limit during post-LOCA conditions. The detection equipment has been upgraded to meet the requirements of NUREG-0737, which included a detection range of 0 to 10 percent hydrogen. Either recombiner unit is capable of controlling the expected hydrogen generation associated with 1) zirconium-water reactions, 2) radiolytic decomposition of water and 3) corrosion of metals within containment.

3/4.6.6 PENETRATION ROOM EXHAUST AIR FILTRATION SYSTEM

The OPERABILITY of the penetration room exhaust system ensures that radioactive materials leaking from the containment atmosphere through containment penetrations following a LOCA are filtered and adsorbed prior to reaching the environment. The operation of this system and the resultant effect on offsite dosage calculations was assumed in the LOCA analyses.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NOS. 89 AND 70

TO FACILITY OPERATING LICENSE NOS. DPR-53 AND DPR-69

BALTIMORE GAS AND ELECTRIC COMPANY

CALVERT CLIFFS NUCLEAR POWER PLANT UNIT NOS. 1 AND 2

DOCKET NOS. 50-317 AND 50-318

Introduction

By application dated September 20, 1983, as supplemented by letter dated October 12, 1983, Baltimore Gas and Electric (BG&E) requested changes to the Calvert Cliffs Technical Specifications (TS). The proposed changes to the TS would (1) clarify the operability requirements for the containment purge isolation valves, (2) correct typographical errors, (3) clarify the Basis for combustible gas control system, (4) change the list of safety related seismic restraints, "snubbers," which are required to be operable and undergo surveillance, (5) change the requirements for surveillance of Containment Spray Actuation Signal (CSAS) Subchannels A-3 and B-3 (Unit 2 only), and (6) change the surveillance requirements for the control room emergency ventilation system.

Discussion and Evaluation

Technical Specification 3.6.1.7 provides Limiting Conditions for Operation (LCOs) for containment purge supply and exhaust isolation valves. Section "b" of the Action Statement specifies remedial action to be taken in the event that these isolation valves experience high leakage rates. The wording of the requirement, however, references only the purge supply valve while the remainder of TS 3.6.1.7 references purge supply and/or exhaust isolation valves. BG&E has proposed a change to the TS to replace the phrase "...one containment purge supply valve..." with the phrase "...one containment purge supply and/or one exhaust isolation valve..." to correct an apparent error. Since the proposed change to the TS is for the purpose of correcting an error, the change is deemed to be administrative in nature and has no other effect on LCO or Surveillance Requirements associated with the containment purge isolation valves. We therefore find the proposed change to be acceptable.

BG&E has proposed a change to TS 3/4.3.3, "Monitoring Instrumentation," to correct a typographical error associated with the containment atmosphere monitor (CAM). The CAM provides a reactor coolant leak detection capability by sampling the containment atmosphere for gaseous and particulate activity. The typographical error involves the measurement range for the gaseous and particulate CAM functions which are specified in TS Table 3.3-6 as 1 to 10^6 cpm. Recently, while reviewing the reactor coolant leak

detection capability, BG&E found that the actual measurement range of the CAM, as indicated by the CAM technical literature, Table 11-13 of the FSAR, and the actual scale of the instrumentation was actually 10 to 10^6 cpm. Thus, BG&E concluded that the lower limit for CAM measurement, as stated in TS Table 3.3-6, should be 10 cpm rather than 1 cpm.

We concur with BG&E that the lower limit for gaseous and particulate CAM monitors should be 10 cpm. Since the proposed TS change would correct a typographical error, the change is administrative in nature, has no other effect on the requirements of TS Table 3.3-6, and is therefore acceptable.

BG&E has proposed a change to TS 3.10-4, "Center CEA Misalignment" to correct a typographical error. The requirements of TS 3.10.4b state that, "The limits of Specification 3.2.1 are maintained and determined as specified in Specification 4.10.5.2 below." The licensee has indicated that the reference to TS 4.10.5.2 is incorrect and should be changed to 4.10.4.2. Our review of the TS indicated that TS 4.10.5.2 is related to xenon reactivity monitoring, is not related to the CEA requirements of TS 3.10.4b, and represents a typographical error when associated with TS 3.10.4b. The requirements of TS 4.10.4.2, however, relate to linear heat rate monitoring and is correctly associated with TS 3.10.4b. Accordingly, we conclude that TS 3.10.4b should be changed correctly to reference the requirements of TS 4.10.4.2. This change has no other effect on TS 3.10.4 and is therefore acceptable.

BG&E has proposed a change to TS Bases 3/4.6.5, "Combustible Gas Control." The proposed change would add the following words to the Bases regarding the containment hydrogen detection capability: "The detection equipment has been upgraded to meet the requirements of NUREG-0737, which include a detection range of 0 to 10 percent hydrogen." The proposed change is consistent with the NRC's letter to BG&E dated April 21, 1983 which provided approval of the Calvert Cliffs hydrogen detection capability (TMI Action Item II.F.1.6) as reviewed against the criteria of NUREG-0737. The proposed change is administrative in nature in that it does not affect any requirements in the TS and is provided only for clarification. Accordingly, we find this change acceptable.

BG&E has proposed several changes to the list of snubbers, contained in TS Table 3.7-4, "Safety Related Snubbers", which are required to be maintained operable and to undergo routine surveillance. Theses changes are as follows:

- Snubber 2-15-10 (Unit 2 only)

  This snubber is installed on Class II safety-related piping in the Component Cooling System and meets the criteria for inclusion in the Technical Specifications. The snubber has been visually inspected and verified to be fully operational through functional testing, thus, it has been fully upgraded to safety-related standards. Due to an oversight, this snubber has been unintentionally omitted from the safety-related snubber program for Unit 2.

° Snubbers 1-83-13 and 1-83-18 (Unit 1 only)

An error was initiated by a BG&E Request for License Amendment dated June 17, 1982. Based upon this request, License Amendments 77 and 58 added several main steam line seismic hydraulic snubbers to the Table 3.7-4 in the Technical Specifications. Two snubbers therein were incorrectly designated as snubber 1-83-17 and 1-83-24. These snubbers should actually have been designated as snubbers 1-83-13 and 1-83-18.

° Snubber 1-60-7 (Unit 1 only)

This snubber was located on the service water return line from #13 Containment Air Recirculation and Cooling Unit, in Unit 1 Containment on the 64 foot elevation. Under an earlier modification, the Architectural Engineer performed revised stress calculations on safety-related systems to upgrade supports and hangers. As a result of these revised calculations, it was determined that this snubber was no longer required, due to low movement of the service water line under postulated loading conditions, including normal, transient, and analyzed accident conditions. The snubber was subsequently removed.

° Snubbers 1-11-13 and 1-11-11A (Unit 1 only)

A system walkdown performed by BG&E identified some administrative corrections for Tables 3.7-4. These changes address changing the "snubber location" column for one snubber (1-11-13) and the "especially difficult to remove" column for two snubbers (1-11-13 and 1-11-11A). Conversations with BG&E indicate that Snubbers 1-11-13 and 1-11-11A had been and continue to be properly maintained.

The proposed changes to the snubber TS are administrative in nature in that they provide consistency between the TS and the present plant configuration. Accordingly, we find the proposed changes to TS Table 3.7-4 to be acceptable.

In the fifth proposed change to the TS addressed herein, the licensee has proposed a conforming change in the Surveillance Requirements for subchannels A-3 and B-3 of the Containment Spray Actuation System (CSAS) for Unit 2 to reflect a previous change in the circuitry. The previous function of CSAS subchannels A-3 and B-3 was to isolate the service water supply to the spent fuel pool coolers on indication of high containment pressure. The licensee has modified the plant by moving these functions to other CSAS actuation channels. Since the service water isolation function would still be tested as part of the CSAS, no change in the operability or surveillance requirements associated with service water isolation has been proposed. CSAS subchannels A-3 and B-3 as reconstituted perform the following functions on indication of high containment pressure: trip the main feedwater, condensate booster, and heater drain pumps and close the main steam and feedwater isolation valves. These automatic actions would isolate the main feedwater system in the event of a steam line break thus preventing overpressurization of the containment.

This modification was performed in response to NRC's concerns associated with continued feedwater addition during a postulated main steam line break as described in NRC's IE Bulletin No. 80-04 dated February 8, 1980.

The present surveillance requirements for subchannels A-3 and B-3, as contained in TS Table 4.3-2, "Emergency Safety Features Actuation System Instrumentation Surveillance Requirements," requiring monthly testing, is no longer appropriate for the reconstituted subchannels A-3 and B-3. Such testing, during reactor operation, would result in a reactor trip due to closure of the main steam isolation valves since the MSIVs cannot be bypassed during testing. Because of the new function of subchannels A-3 and B-3, the licensee has proposed that a new requirement be added to the TS so that CSAS subchannels A-3 and B-3 would be tested every 18 months during plant shutdown. This is appropriate considering the design of the associated equipment and the need to prevent unnecessary reactor scrams. Since testing of the service water isolation function is not affected by the proposed change, and since the proposed change requires periodic testing of the new function of the subchannels which was not previously incorporated in the TS, the proposed change represents an additional restriction. Accordingly, we find the proposed change to TS Table 4.3-2 to be acceptable.

The final proposed change to the TS, addressed herein, would modify the surveillance requirements for the control room emergency ventilation system. The Control Room/Cable Spreading Room ventilation system includes a redundant, year round, safety related, air conditioning system serving both Unit Nos. 1 and 2. Air conditioning is required in these rooms to regulate the temperature under which safety related equipment must function. In order to provide better operating conditions for operators during the summer, the safety related air conditioning system has been augmented with additional trains of non-safety related air conditioning equipment consisting of a chilled water coil system installed in existing ventilation ductwork, two chill water pumps, and a 220-ton chiller unit. All electrical and mechanical components of the safety related and non-safety systems are independent of each other with the exception of the existing ductwork and fans.

At the present time, TS 4.7.6.1 requires confirmation of the operability of the control room air conditioning system by verifying, at least once per twelve hours, that the control room air temperature is less than or equal to 120°F. Since the non-safety grade backup control room air conditioning system is normally in operation, with the safety grade system in standby, the existence of acceptable temperatures in the control room does not indicate that the safety grade system is operable. (The safety grade system automatically starts when the control room temperature exceeds the thermostat setpoint.)

Accordingly, BG&E has proposed a change to TS 4.7.6.1a to provide for a surveillance which will assure that the safety grade air conditioning system will be properly tested. The proposed surveillance would require that, "At least once per 62 days, on a staggered test basis, by deenergizing

the backup control room air conditioner, verifying that emergency control room air conditioners maintain air temperature less than or equal to 104°F for at least 12 hours." A 62 day, staggered test of a two component system would require each component to be tested in alternate months.

As indicated previously, the addition of the non-safety grade control room air conditioning system rendered TS 4.7.6.1a meaningless with regard to surveillance of the safety grade air conditioning system. The proposed TS provides a meaningful test of the safety grade system at a frequency that is consistent with similar safety grade components; therefore, the TS represents an additional restriction. Moreover, the proposed TS is more stringent than the existing TS in that the criteria for acceptable operation of the safety grade control room air conditioning system has been decreased from 120°F to 104°F. Accordingly, we find the proposed change to TS 4.7.6.1a to be acceptable.

Environmental Consideration

We have determined that the amendments do not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendments involve an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of the amendments.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Date: December 30, 1983

Principal Contributor:
D. Jaffe